

Abstract of the Disclosure

5 The invention relates to a rotary piston machine. A housing defines a prismatic chamber the cross section of which forms an oval of odd order, which is alternately composed of circular arcs having a first relatively small radius of curvature and circular arcs having a second, relatively large radius of curvature, which arcs change into each other continuously and differentiably. Corresponding
10 first and second cylindrical inner wall sections are formed. A rotary piston is guided in the chamber, the cross section of the rotary piston forming an oval the order of which is one less than the order of the chamber. Opposite cylindrical nappe sections are formed at the rotary piston, of which, in each position, a respective one is rotatable in a cylindrical inner wall section of equal radius of curvature and the
15 respective other one engages an opposite inner wall section. The rotary piston, in each position, subdivides the chamber into two working chambers. Piston-fixed instantaneous axes of rotation of the rotary piston are defined in a center plane. Driving agents for driving the rotary piston are cyclically passed into and out of the working chambers. The rotary piston, in each interval of movement, is rotating with
20 one of the opposite nappe sections in an inner wall section about an associated instantaneous axis of rotation and is sliding with the opposite nappe section along the opposite second inner wall section of the chamber and is reaching a stop position there. The instantaneous axis of rotation subsequently jumps, for the next interval of movement, into a changed position defined by one of the other piston-
25 fixed axis of rotation. A driving or driven shaft is coupled with the rotary piston. In order to avoid a kinematic underderfinition of the instantaneous axes of rotation in the stop position, the respective one of the instantaneous axes of rotation is temporarily mechanically fixed.